

**Fact Sheet  
July 2002**

# **FORMER MURRIETA CHRISTIAN ACADEMY SITE (CROSSROADS INVESTORS III PROPERTY) MURRIETA, CALIFORNIA**



## *Proposal to Clean Up Lead-Contaminated Soil*

*DTSC is one of six Boards and Departments within the California Environmental Protection Agency. The Department's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.*

State of California



California  
Environmental  
Protection Agency



This fact sheet presents the proposed plan for cleaning up lead-contaminated soil at the former Murrieta Christian Academy/Oakley Battery Plant site in Murrieta, California. It also describes the results of the environmental investigation that formed the basis for the cleanup plan. The Department of Toxic Substances Control (DTSC) invites you to review and comment on the proposed cleanup, called a Draft Removal Action Workplan (RAW), and to attend a community meeting to hear a presentation, ask questions, and voice your opinions.

Now a vacant lot, the approximately 20-acre site at 24250 Adams Avenue was investigated to determine the extent of lead contamination in the soil resulting from the former battery recycling operation. The property is now owned by Crossroads Investors III, LLC (Crossroads), which conducted the investigation under direct DTSC oversight. After cleanup is complete and DTSC has determined that the site is safe for residential use, the owners plan to build a 55-lot subdivision on

### **PUBLIC COMMENT PERIOD**

You are invited to submit written comments on the Draft Removal Action Workplan (RAW) and Draft Negative Declaration from July 8, 2002 through August 7, 2002, and to give oral comments at the public meeting. The Draft RAW and Draft Negative Declaration are available at the Murrieta Library (Reference section) at 39589 Los Alamos Road in Murrieta. Please send written comments, emailed or postmarked by August 7, 2002, to Mr. Pradip Desai, DTSC Project Manager, 5796 Corporate Avenue, Cypress, CA 90630. Email address: [pdesai@dtsc.ca.gov](mailto:pdesai@dtsc.ca.gov). The documents are also available at the DTSC office at the address listed above. To arrange to view them there, please call Julie Johnson at (714) 484-5337.

### **PUBLIC MEETING**

**7 p.m. Monday, July 15, 2002  
Murrieta Community Center  
41810 Juniper Street, Murrieta**

At this meeting DTSC will present the results of the environmental investigation and planned cleanup, answer questions, and take oral and written comments.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at [www.dtsc.ca.gov](http://www.dtsc.ca.gov).*

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the property.

The property owners are paying for the investigation and cleanup.

Below is a brief summary of the findings and proposed cleanup, followed by a description of the site history, investigation, and cleanup plan. Full details are provided in the Draft RAW document at the Murrieta Library (see box on page 1). In addition, the public is invited to review and comment on the Draft Negative Declaration, which is DTSC's finding that the proposed cleanup action itself would not have a significant negative impact on the environment (from dust, habitat disturbance, etc.).

## OVERVIEW OF FINDINGS AND PLANNED CLEANUP

Soil samples taken throughout the site identified areas of lead contamination that potentially pose a health risk if not cleaned up. There is no indication that the lead contamination has affected groundwater or drinking water wells. Crossroads, with DTSC concurrence, proposes to remove contaminated soil using standard excavation equipment and move it to an off-site, permitted facility for treatment and/or disposal. The cleanup goal is to remove all soil with lead levels above 150 parts per million, the cleanup level for residential use set by the California Environmental Protection Agency. During the excavation and transport of the soil, safety precautions would be taken to minimize dust and prevent spilling or spreading the soil onto nearby properties.

## SITE HISTORY AND SETTING

The site is bordered on the south by Las Brisas Church and school; on the southeast corner by Oak Grove Institute for middle school and high school students; on the east by vacant land designated for commercial/industrial use; and on the north and west by residences. Approximately one-half mile from the site are Murrieta Valley High School and Thompson Middle School.

Between 1955 and 1960, a building on the western portion of the site was used for a lead battery recycling operation. This battery operation was the source of the lead contamination in the soil. In the 1980s, the building was used by the Murrieta Christian Academy. The eastern portion of the site has always been open, unused land.

In January 1988, at the request of nearby residents, the Riverside County Department of Environmental Health

took soil samples at the site. At this time the Murrieta Christian Academy was in operation. Results showed lead levels generally in the 1000-to-2000 parts per million range, with the highest level recorded at 24,000 parts per million. The County requested the U.S. Environmental Protection Agency (EPA) to assist with further site assessment. In addition, in February 1988 the children and staff at the school were given blood tests to see if they had been affected. The results showed that none of the blood lead levels was above normal.

In March 1988 the EPA conducted further soil sampling, followed by a removal action from September 1988 through January 1989 that consisted of excavating the contaminated soil, consolidating it in one location behind the school, and sealing it with an asphalt cap.

The school closed in 1989 and the lot has been unused since then. The current property owners bought the land in August 2000. From June 2000 through December 2000, more soil samples were taken. Crossroads demolished the former school and related buildings in 2001, leaving only a concrete loading dock that was originally part of the battery plant. In January 2002, the property owners signed an agreement with DTSC to clean up the site.

## RESULTS OF FINAL INVESTIGATION

In February 2002, Crossroads conducted a final investigation under DTSC oversight in preparation for developing a cleanup plan. Soil samples were taken at 30 locations (see figure on page 3) throughout the property, at depths varying from surface-level to 25 feet deep. Four samples were taken across the street from the site, to help establish "background" or "normal" levels of lead for the general vicinity as a point of comparison.

All soil samples were sent to a laboratory for analysis. A total of 6 samples showed elevated (above 150 parts per million) levels of lead, all of them from the area where the former battery building had been located. In this investigation, the highest concentration found was 33,800 parts per million. This sample was taken from under the asphalt cap, where the excavated soil had been placed in the earlier cleanup action. Outside the asphalt cap area, the samples with elevated lead levels ranged from 203 to 3,000 parts per million. None of the samples from the eastern portion of the site had elevated lead levels.

No contamination was found deeper than 5 feet below the surface. Because the lead is relatively near the surface, and because lead is not readily dissolved into water, there is no indication that groundwater or drinking water wells in the area have been contaminated.

The depth to groundwater in the area is approximately 400 feet.

DTSC determined that this site poses a health risk if not cleaned up. Lead can cause health effects to those directly exposed to it at high levels over a period of time. In the case of lead in soil, this exposure comes from ingesting it (for example, children eating the dirt), by direct contact with the skin (such as through gardening or other contact), and inhaling it by breathing the dust. Casual or short-term exposure such as walking through the area, or breathing dust blown from a distance, is not usually enough to pose a health risk. However, any future residents living directly on the site would be at risk if it were not cleaned up. Because health effects are so dependent on the length and frequency of exposure, the risk from this site to nearby residents in the past cannot be determined. However, the blood testing done in 1988 on the children and staff of the Murrieta Christian Academy, who had the most direct contact with the soil, showed that they had not been affected. Since the first removal action in 1988-89, most of the contaminated soil has been covered with the asphalt cap, minimizing any further exposure.

## CLEANUP ALTERNATIVES CONSIDERED

The cleanup goal for the site is to remove soil containing lead at levels higher than 150 parts per million. Three

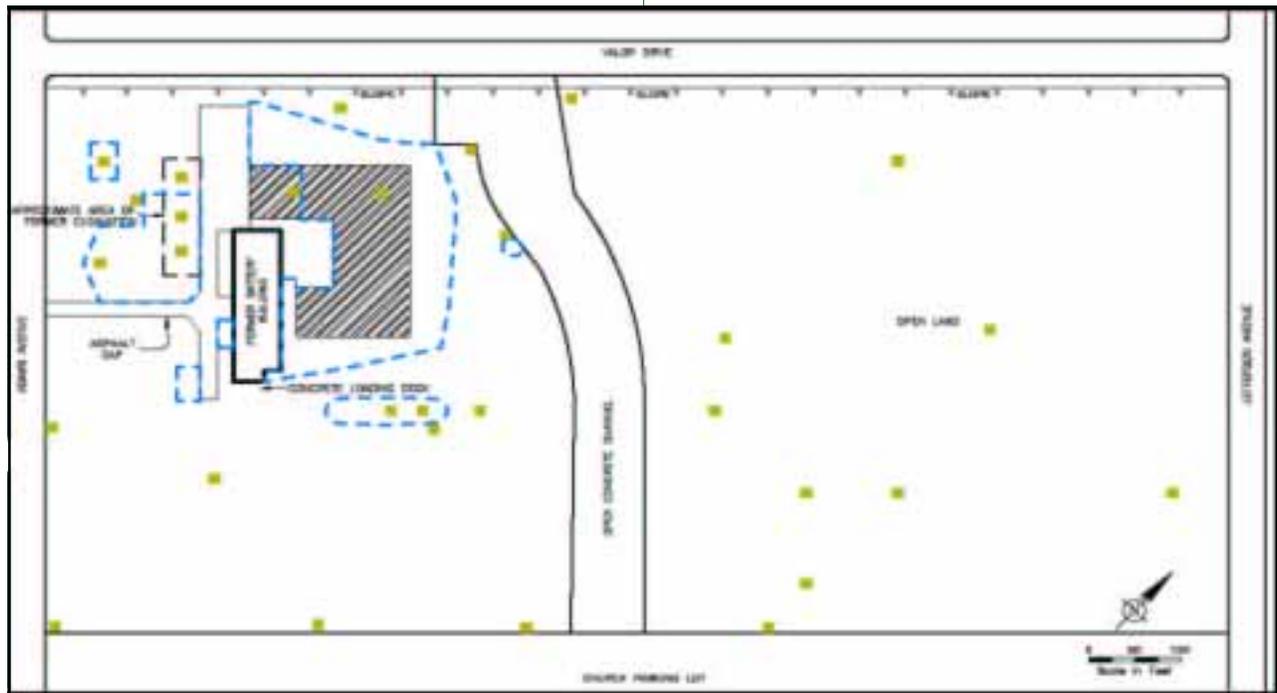
possible cleanup methods were evaluated based on the criteria of effectiveness in protecting human health and the environment, feasibility (how easily they could be implemented), and cost. The three alternatives considered were:

- 1) Excavation and off-site disposal. Estimated cost: \$273,000 to \$455,000.
- 2) Excavation and off-site stabilization and disposal. Estimated cost: \$390,000 to \$546,000.
- 3) Excavation and on-site stabilization and reuse of stabilized material. Contaminated soil would be excavated and stabilized on-site by the addition of cement, asphalt, or other chemical binders. Estimated cost: \$429,000 to \$500,000.

All three alternatives would be effective in removing the contamination. However, Alternative 3 had several drawbacks that made it unacceptable, primarily because it could potentially raise more dust, and because it would leave a considerable amount of solid (though non-hazardous) waste on site.

## PROPOSED ALTERNATIVE

A combination of Alternatives 1 and 2 is being proposed as the preferred cleanup plan. Under this plan, the soil



*Site Diagram: The small squares show the sampling locations. The dashed lines show the approximate excavation areas. The heavily shaded area above and to the right of the former battery building is the soil encapsulation area.*

would be excavated from the area in the vicinity of the former battery plant facility (see figure on page 3) using standard construction equipment. The soil would be stockpiled on site for no more than 7 days on the existing concrete slab or existing asphalt cap and covered with polyethylene sheeting. Each pile would be sampled to determine whether it is classified as hazardous or non-hazardous waste, depending on the amount of lead contamination. Non-hazardous waste would go directly to the permitted landfill or to an offsite recycling facility. Hazardous waste would go to the landfill facility for stabilization (mixing with a solidifying agent such as cement) before being placed in the landfill.

The proposed removal area is approximately 60,000 to 70,000 square feet. The depth of the excavation would range from approximately 6 inches to 5 feet, with an estimated total volume of 3,000 to 3,500 cubic yards of soil to be removed. Soil at the bottom and/or sides of each excavated area would be sampled frequently as work progressed, and if there were remaining lead above cleanup goals, more soil would be excavated until it was determined that the cleanup goal had been met.

The excavation and removal would be expected to last approximately 3 to 4 weeks.

Throughout the earth-moving activity, the soil would be sprayed with sufficient water to minimize dust but not enough to cause runoff. In addition, air monitoring equipment would be used to ensure that dust levels do not exceed limits set by the South Coast Air Quality Management District (AQMD) and the Occupational Safety and Health Administration (OSHA). These dust control measures, as well as other safety precautions detailed in the Draft RAW, are designed to protect both the onsite workers and nearby residents.

According to the traffic safety plan, excavation equipment and trucks would use the following route for going to and from the site: Interstate 15-Clinton Keith Rd.-Palmor St.-Magnolia St.-Adams Ave. They would not pass by the entrance of Las Brisas church and school east of the site. The trips would be restricted to the hours of 8 a.m. to 5 p.m., Monday through Saturday. Soil being transported off the site would be moistened to minimize dust and covered with polyethylene sheeting to prevent spillage.

Once the excavation and removal is complete, DTSC would conduct final sampling to certify that the site is clean. The excavations would be backfilled with clean soil from other parts of the site.

## **CLEANUP PLAN'S EFFECT ON HEALTH AND ENVIRONMENT**

DTSC has prepared a detailed study of the proposed action to see if the cleanup itself would have negative effects on human health or the environment. This study was conducted in accordance with the California Environmental Quality Act. For example, DTSC looked at whether the excavation and removal would cause excess dust, disturb wildlife habitat, etc. The resulting report is a Draft Negative Declaration, which is DTSC's determination that the cleanup activities would not have any such negative effects. This Draft Negative Declaration is also available for public review and comment along with the Draft RAW.

## **WHAT HAPPENS NEXT**

A final decision on the cleanup plan will not be made until after the public has reviewed and commented on the documents. All comments will be taken into consideration and addressed in the Final RAW and Final Negative Declaration. A copy of the formal responses will be mailed to everyone who submitted a comment.

## **FOR MORE INFORMATION**

The Draft RAW, Draft Negative Declaration, and other documents related to this site, including reports from the previous investigations and actions, are available at the Information Repository at the Murrieta Library, 39589 Los Alamos Road. Details on how to submit comments are shown in the box on the front page of this fact sheet. You are also invited to attend the public meeting scheduled for 7 p.m. Monday, July 15, 2002, at the Murrieta Community Center. At this meeting DTSC will give a presentation, answer questions, and take both oral and written comments.

For questions, please call Kim Foreman, DTSC Public Participation Specialist, at (714) 484-5324; or Pradip Desai, DTSC Project Manager, at (714) 484-5471.

